Name: Enrolment No:	

UPES

End Semester Examination, May 2025

Course: One Health — Semester: II

Program: M.Sc. (Nutrition and Dietetics) — Time : 03 hrs.

Course Code: HSCC7023O — Max. Marks: 100

Instructions: Please read all the questions carefully.

S. No.	Section A Short answer questions/ MCQ/T&F (20Qx1.5M= 30 Marks)	Marks	COs
Q 1	When the pathogen spills over through vectors, wildlife, or domestic animals, which process will help prevent this? A. Rapid response B. Early detection C. Forecasting Readiness D. Controlled operations	1.5	CO-2
Q 2	WHO identifies five phases of infectious disease emergence. Which of the following are in the correct order? A. Pre-emergence, Epidemic, Emergence, Localised Transmission, Pandemic. B. Pre-emergence, Emergence, Localised Transmission, Pandemic, Epidemic. C. Pre-emergence, Emergence, Localised Transmission, Epidemic, Pandemic. D. Pre-emergence, Pandemic, Emergence, Localised Transmission, Epidemic.	1.5	CO-2
Q 3	The safe limit of Atmospheric CO_2 concentration is: A. 250 ppm B. 350 ppm C. 420 ppm D. 550 ppm	1.5	CO-1
Q 4	Name the German scholar from the mid-1800s who was an early proponent of One Health. A. Rudolf Virchow B. Calvin Schwabe C. Lonnie King D. Dr. Renu Swarup	1.5	CO-1
Q 5	International One Health Day is officially celebrated around the world every year. On which day is it celebrated? A. October 10	1.5	CO-3

	B. November 3 C. January 8 D. August 12		
Q 6	Which of the following statements is true for pathogen crossover? A. The pathogen must overcome a series of barriers to transmit from one species to another. B. Spillover of some pathogens requires that gaps (depicted as holes) in all the barriers align within a narrow window in space and time. C. If any of the barriers are impenetrable, spillover cannot occur. D. All of the above.	1.5	CO-2
Q 7	The primary goal of integrated disease surveillance is to: A. Strengthen animal farming. B. Improve environmental conservation. C. Detect and respond to disease outbreaks. D. Eliminate vector-borne diseases entirely.	1.5	CO-2
Q 8	Which level of community participation is 'Community-owned'? A. Level 1 B. Level 2 C. Level 3 D. Level 4	1.5	CO-1
Q 9	Why is antimicrobial resistance a threat to controlling emerging infectious diseases? A. It makes infections more challenging to treat. B. It reduces antibiotic effectiveness. C. It increases hospital stays and costs. D. All of the above.	1.5	CO-1
Q 10	Identify the incorrect pair A. Climate Change → Extreme Weather. B. Biodiversity Loss → Disruption of Food Webs. C. Land-System Change → Deforestation & Soil Degradation. D. Freshwater Overuse→ Biodiversity loss.	1.5	CO-2
Q 11	Which of the following is NOT a factor in disease emergence? A. Climate change. B. Habitat destruction. C. Increased surveillance. D. Antimicrobial resistance.	1.5	CO-1
Q12	The Food Safety and Standards Act 2006 received the assent of the President on which date. A. August 23, 2006 B. August 13, 2006 C. September 23, 2006	1.5	CO-1

	D. September 13, 2006		
Q13	Which of the following diseases is NOT considered an emerging infectious disease? A. SARS B. Ebola C. Tuberculosis D. Zika	1.5	CO-1
Q14	Identify the process by which antimicrobial resistance can be minimized A. Antibiotic stewardship. B. Development of novel treatments. C. Rapid diagnostic techniques. D. All of the above.	1.5	CO-2
Q15	Which factor influences whether an emerging disease becomes endemic or epidemic? A. Population density. B. Climate change. C. Healthcare infrastructure. D. All of the above.	1.5	CO-1
Q16	Identify the vector responsible for the spread of Kyasanur Forest Disease A. Tsetse fly B. Laptotrombidium Mite C. Hard Ticks D. Freshwater snails	1.5	CO-1
Q 17	What does a pathogen need to successfully cross species barriers? A. Genetic adaptation. B. Increased human immunity. C. Host resistance. D. Decreased transmission.	1.5	CO-1
Q 18	Identify the term used for A disease that is consistently present in the population, with relatively low spread. A. Epidemic B. Endemic C. Pandemic D. All of the above	1.5	CO-1
Q 19	The term "spillover" refers to: A. The spread of pathogens between humans. B. The transfer of pathogens from animals to human. C. The containment of an outbreak. D. All of the above.	1.5	CO-3
Q 20	Where is the Centre for One Health located? A. Odisha B. Nagpur	1.5	CO-2

	C. Mumbai D. Chennai		
Section B (4Qx5M=20 Marks)			
Q 21	Explain the various levels of community engagement. Describe key strategies for effective community engagement in healthcare.	5	CO-1
Q 22	Enlist the common pathogen associated with food safety. Suggest prevention measures to minimize these pathogens in the foods.	5	CO-2
Q 23	Illustrate the mechanisms of pathogen crossover across species boundaries.	5	CO-2
Q 24	Discuss the environmental and health consequences of deforestation and atmospheric aerosol loading. Additionally, propose strategies to mitigate these impacts.	5	CO-3
Section C (2Qx15M=30 Marks)			
Q 25	What is the disease triangle? Explain the factors influencing the transmission and emergence of diseases.	15	CO-2
Q 26	As a scientist applying the One Health approach, outline the plans and strategies you would design and implement to eliminate COVID-19-like pandemic in the future.	15	CO-3
Section D (2Qx10M=20 Marks)			
Q 27	What is an antimicrobial stewardship program? Determine the goals of an antimicrobial stewardship program.	10	CO-2
Q 28	Describe the concept of planetary boundaries. Explain the complex interactions between planetary boundaries and their impacts on human health and diseases.	10	CO-3